

FORM PTO-1390
(REV 11-98)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371

40097

U.S. APPLICATION NO. (known, see 37 CFR 1.55)
09/601279INTERNATIONAL APPLICATION NO.
PCT/EP98/06020INTERNATIONAL FILING DATE
22 September 1998

PRIORITY DATE CLAIMED

TITLE OF INVENTION Floor Carpet Installing System

APPLICANT(S) FOR DO/EO/US

Axel Schulte

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☐ This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - a. ☒ is transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☐ has been transmitted by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
 - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☐ have been transmitted by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☒ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☒ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern document(s) or information included:

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☒ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☒ A FIRST preliminary amendment.
☐ A SECOND or SUBSEQUENT preliminary amendment.
14. ☐ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☐ Other items or information:

U.S. APPLICATION NO. 09/601279 <small>37 CFR 1.53</small>		INTERNATIONAL APPLICATION NO. PCT98/06020		ATTORNEY'S DOCKET NUMBER 40097	
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17. <input checked="" type="checkbox"/> The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) : Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$970.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$840.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$760.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$670.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) \$96.00 ENTER APPROPRIATE BASIC FEE AMOUNT =				CALCULATIONS PTO USE ONLY	
				\$ 840.00	
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$ 0	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	9 - 20 =	0	X \$18.00	\$ 0	
Independent claims	1 - 3 =	0	X \$78.00	\$ 0	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)				+ \$260.00	
TOTAL OF ABOVE CALCULATIONS =				\$	
Reduction of 1/2 for filing by small entity, if applicable. A Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28).				\$ 840.00	
SUBTOTAL =				\$ 840.00	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				\$ 0	
TOTAL NATIONAL FEE =				\$ 840.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				+ \$ 40.00	
TOTAL FEES ENCLOSED =				\$ 880.00	
				Amount to be:	
				refunded	
				charged	

a. ☒ A check in the amount of \$ 880.00 to cover the above fees is enclosed.

b. ☐ Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees.
 A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any
 overpayment to Deposit Account No. 18-2220. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO Mark S. Bicks Roylance, Abrams, Berdo & Goodman, L.L.P. 1300 19th Street Suite 600 Washington, D.C. 20036	 SIGNATURE Mark S. Bicks <hr/> NAME 28,770 <hr/> REGISTRATION NUMBER
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534 Rec'd PCT/PTC 31 JUL 2000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : PATENT
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Axel Schulte :
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Serial No.: :
:
Filed: Herewith :
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For: FLOOR CARPET INSTALLING SYSTEM :

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Preliminary to examination and calculation of the filing fee, please amend the above-identified application, as amended by Preliminary Examination, as follows:

IN THE CLAIMS

Claim 3, line 1, delete "or 2".

Claim 4, line 1, delete "or 2".

Claim 5, line 1, delete "or 2".

Claim 6, line 1, change "one of the Claims 1 to 5" to --Claim 1--.

REMARKS

The above changes eliminate multiple dependency in claims.

Respectfully Submitted,



Mark S. Bicks
Reg. No. 28,770

Roylance, Abrams, Berdo & Goodman, L.L.P.
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Dated: July 31, 2000

MODIFIED SHEET

Gottlieb Binder GmbH & Co., 71088 Holzgerlingen

Floor Carpet Installation System

The invention relates to a floor carpet installation system with the useful surface of the carpet being formed by its nap side and with an anchoring means that can be fixed to the floor, the anchoring means having protuberant mushroom-shaped elements having the form of fingers with thickenings at their ends, which come into interlocking engagement with the backside of the carpet formed of a loopless material, opposite the nap side.

A floor carpet installation system of this type is known already from DE 195 32 685 A1. In the known system a so-called mushroom strip is provided as anchoring means to be fastened to the floor, of which upwardly protuberant mushroom-shaped interlocking elements interlock together with its end thicknesses with a felt layer, which forms the backside of the carpet to be installed. This type of anchoring of the carpet incorporates certain inadequacies. In particular, this type of anchoring does not form a sufficiently secure connection for the prevention of sliding along the carpet plane. As a result then formation of buckling and bulges can occur during use, especially with higher stresses, for example by sliding of heavy pieces of furniture, leading to greater danger of damage.

MODIFIED SHEET

-2-

The object of the invention is to disclose a floor carpet installation system which guarantees a comparably improved anchoring between carpet and floor.

With a floor carpet installation system of the aforementioned type this object according to the invention is attained in that a micro-adhesive closing is provided as anchoring arrangement, in which the thicknesses of the fingers of the interlocking elements have the shape of plate-like heads, which are provided on the top with concave depressions, and that the depressions are provided with an adhesive causing additional connection with the backside of the carpet.

In this manner an especially fixed connection is attained in relation to relative movements along the carpet plane. Owing to the fact that longitudinal sliding is definitely prevented, no danger exists of arching or buckling, even with greater stress.

A micro-adhesive closing which is particularly suitable for the system according to the invention is known from DE 196 318 A1. In this case, according to the material make-up of the carpet to be installed, in particularly according to the structure of the carpet backside, a micro-adhesive closing with a thickness of the carrier of the interlocking elements of 0.1 to 0.5 mm and with 20 to 600 interlocking elements per cm² can be used.

One method for especially simple manufacture of micro-adhesive closings having interlocking elements with plate-like heads, whereby the heads are provided on their tops with concave depressions, is suggested in German patent application 198 28 856.5.

The depressions of the heads can be provided with the adhesive providing an additional connection with the backside of the carpet for example by scraping the adhesive on the heads.

Textile materials in the form of felts or fleeces can be provided as the backside of the carpet, or else loose breaker fabric or smooth stitching as found in non-woven textiles or materials.

Hereinafter the invention is to be explained in detail relative to the drawing. In the drawing are to be found :

- Fig. 1 a diagrammatically simplified and broken open cross section through a floor carpet with open nap and loopless backside;
- Fig. 2 a perspective, greatly enlarged view of a microplast-adhesive closing component, whereby a cross section of one individual interlocking element is represented greatly enlarged;

MODIFIED SHEET

-4-

- Fig. 3 a view corresponding to that of Fig. 2, whereby depressions on the tops of the heads of the interlocking elements are provided with adhesive, and
- Fig. 4 a broken open plan view in almost normal dimensions of the loopless backside of the carpet of Fig. 1.

Fig. 1 shows an enlarged, diagrammatically simplified representation of a cross section through a floor carpet with nap elements 1 of the traditional sort, extending upward from a connection layer 3 and forming the nap side of the carpet to serve as the useful surface. The backside 5 opposite the nap side is formed by a material having no loops. For this purpose materials can be considered which lend the carpet structure a certain degree of rigidity, alignment stability and tear resistance. For this purpose felt or fleece might be considered, which attain their mechanical composition by the tufting method and are glued together with connection layer 3 of the carpet. Loose breaker fabric or smooth right/left stitching and other so-called non-woven materials are also suitable for this purpose.

Fig. 2 shows a section of a strip of a microplast-adhesive closing 7 as disclosed in DE 196 46 318 A1. The thermoplastic strips (which may be for example polyolefin or a blend of polyamides) are formed in the gap between a pressing tool and a molding tool and form a foil-like carrier 9 with fingers 11 protruding out of its top. According to the mechanical construction and fineness of the structure of backside 5 of the relevant carpet, the arrangement of fingers 11 has a finger density of approximately 20 to 600 fingers 11 per cm², with a thickness of carrier 9 of

MODIFIED SHEET

-5-

approximately 0.1 to 0.5 mm. Other finger densities and/or thicknesses of carrier 9 can of course come into consideration according to special circumstances.

As can be seen especially from the sectional representation shown greatly enlarged in Fig. 2, the thickened heads 13 of fingers 11 are shaped into a mushroom- or plate-shape with concave topside, so that there is a depression 15 within the edges of each head 13.

With the example shown in Fig. 3, depressions 15 of heads 13 are filled with adhesive 17. This can be applied by spreading on or scraping on, in order to cause an additional composite binding effect, following the interlocking engagement with backside 5 of the relevant carpet. For example an adhesive on acrylate base, for instance 2-ethyl hexyl acrylate or butyl acrylate can be considered as an adhesive, in various different selected mixture ratios, in order to vary the plasticizing and the plasticity and adhesive power as desired and as required.

With installation of wall-to-wall carpets, adhesive closing 7 can be provided in the form of long strips or bands. With installation of the carpet in sections, shorter, individual strip segments can be provided in a suitable manner.

Patent Claims

1. Floor carpet installation system with a carpet forming the useful surface with its nap side (1) and an anchoring means (7) which can be fastened to the floor, which includes upwardly protruding, mushroom-like interlocking elements (9), which have the form of fingers (11) with thicknesses at their ends, which come into interlocking engagement with the backside (5) of the carpet formed of a loopless material, opposite the nap side (1), characterized in that a micro-adhesive closing (7) is provided as anchoring means, in which the thicknesses of the fingers (11) of the interlocking elements have the shape of plate-like heads (13), which are provided with concave depressions (15) on their tops, and that the depressions (15) are provided with an adhesive (17) providing an addition connection with the backside (5) of the carpet.
2. Floor carpet installation system as in Claim 1, characterized in that an adhesive (17) on an acrylate base is provided.
3. Floor carpet installation system as in one of the Claims 1 or 2, characterized in that felt or fleece is provided as the loopless textile material of the backside (5) of the carpet.
4. Floor carpet installation system as in Claim 1 or 2, characterized in that loose breaker fabric or smooth stitches are provided as loopless textile materials of the backside (5) of the carpet.

MODIFIED SHEET

-7-

5. Floor carpet installation system as in Claim 1 or 2, characterized in that non-woven textiles such as synthetic materials, needle felt or needle nap are provided as loopless textile material of the backside (5) of the carpet.
6. Floor carpet installation system as in one of the Claims 1 to 5, characterized in that the backside of the micro-adhesive closing (7) opposite the interlocking means (11) can be connected with the floor by application of adhesive.

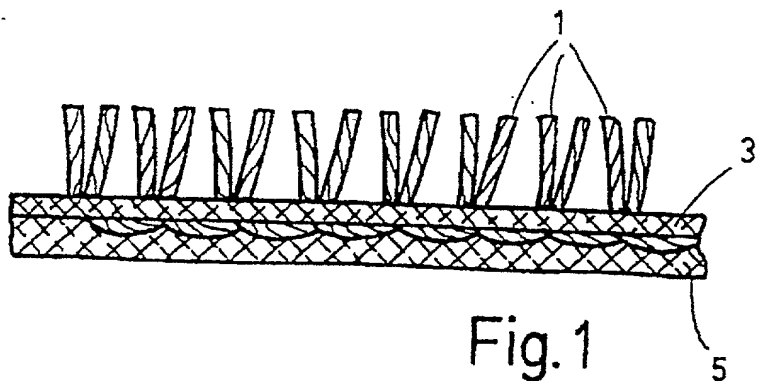


Fig. 1

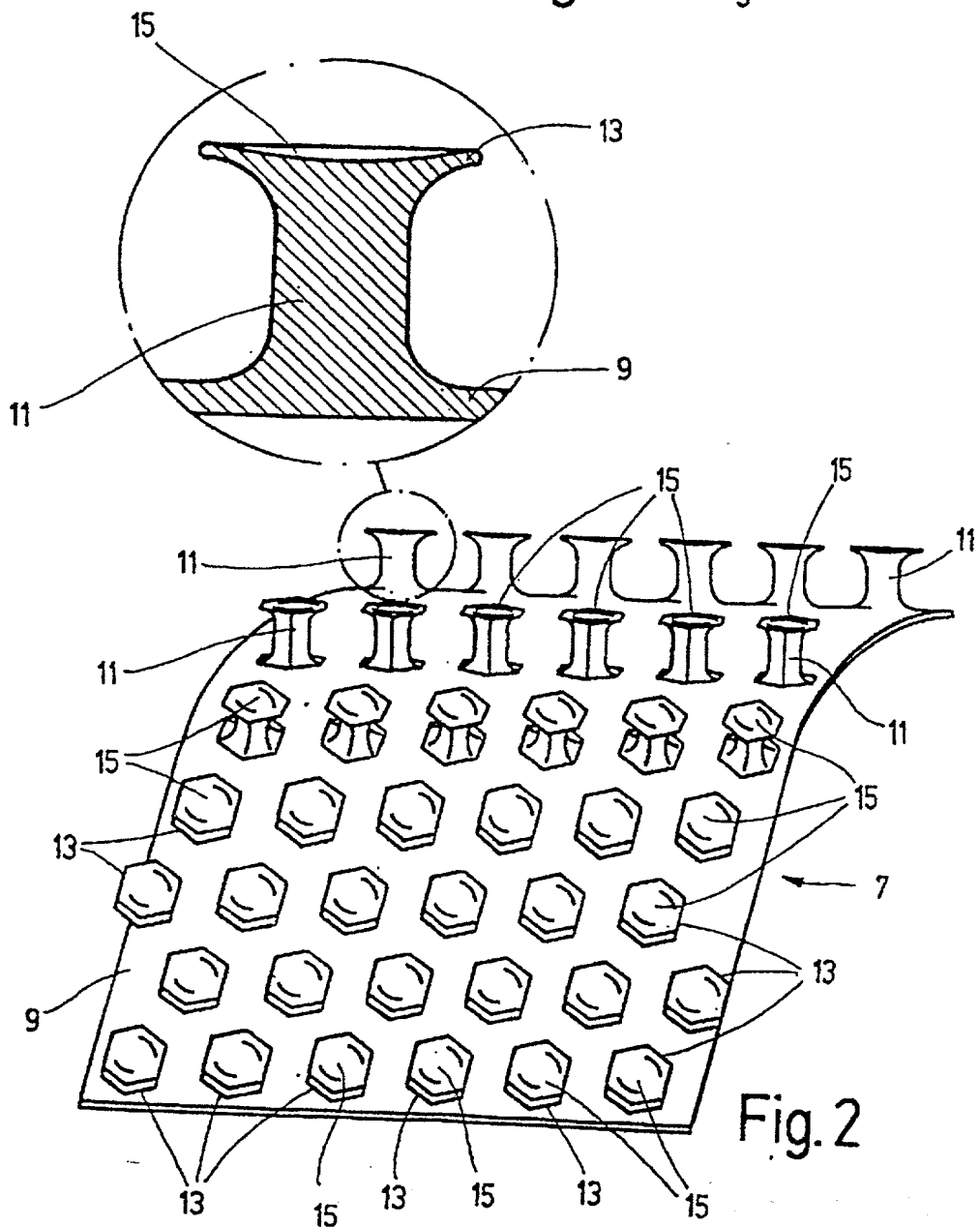
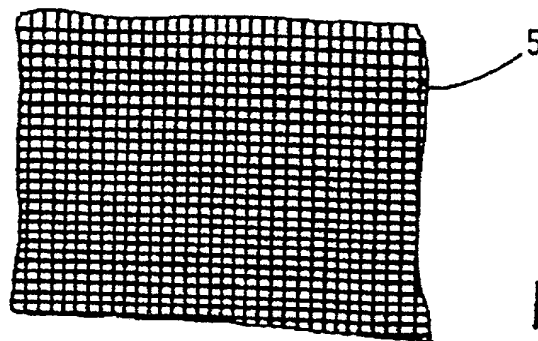
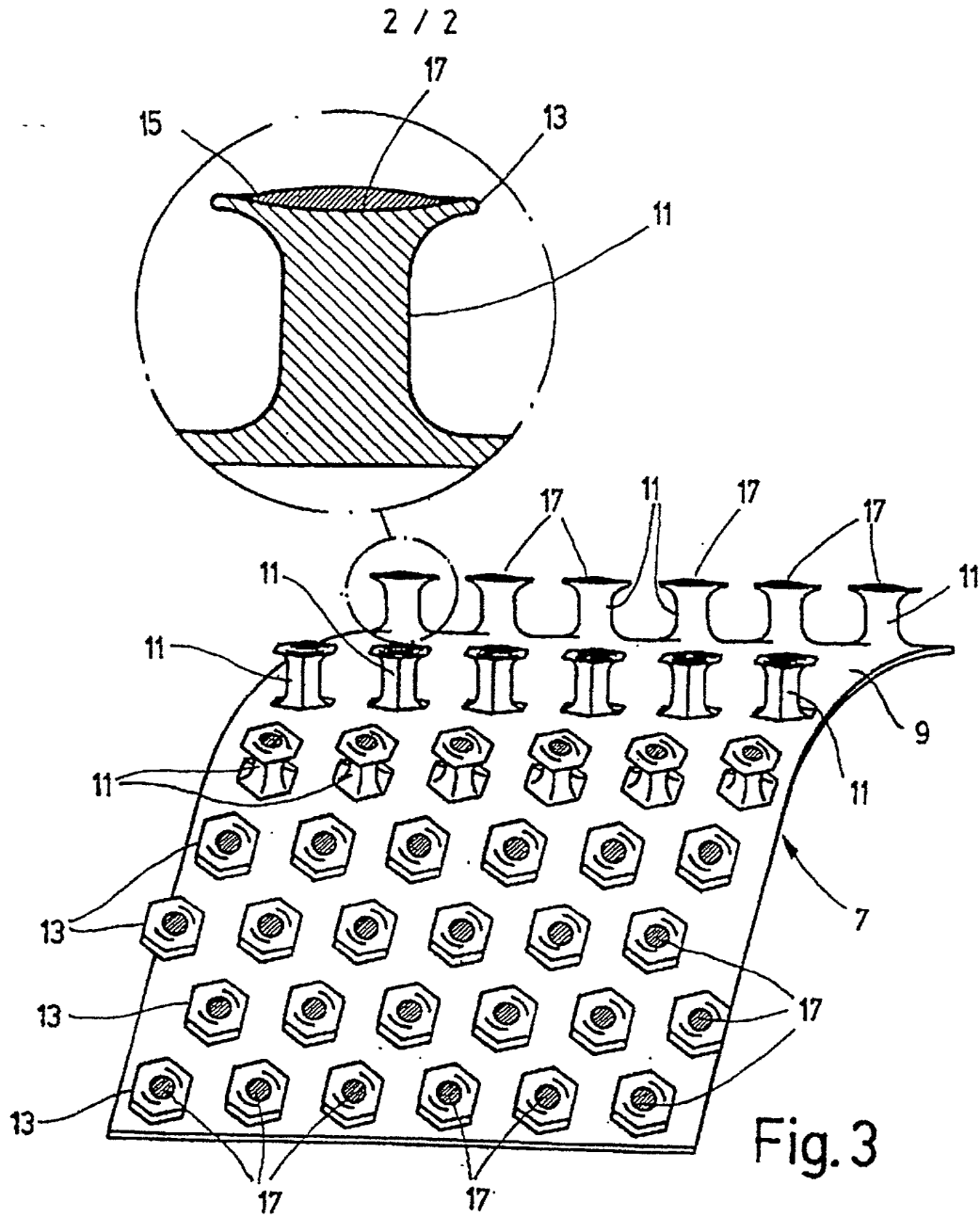


Fig. 2

09601279-073104
101E20-622F0960



Declaration and Power of Attorney for Patent Application Erklärung für Patentanmeldungen mit Vollmacht

German Language Declaration

Als nachstehend benannter Erfinder erkläre ich hiermit an Eides Statt:

daß mein Wohnsitz, meine Postanschrift und meine Staatsangehörigkeit den im nachstehenden nach meinem Namen aufgeführten Angaben entsprechen, daß ich nach bestem Wissen der ursprüngliche, erste und alleinige Erfinder (falls nachstehend nur ein Name angegeben ist) oder ein ursprünglicher, erster und Miterfinder (falls nachstehend mehrere Namen aufgeführt sind) des Gegenstandes bin, für den dieser Antrag gestellt wird und für den ein Patent für die Erfindung mit folgendem Titel beantragt wird:

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deren Beschreibung hier beigelegt ist, es sei denn (in diesem Falle Zutreffendes bitte ankreuzen), diese Erfindung

- ☐ wurde angemeldet am _____
unter der US-Anmeldenummer oder unter der
Internationalen Anmeldenummer im Rahmen des
Vertrags über die Zusammenarbeit auf dem Gebiet
des Patentwesens (PCT)
_____ und am
_____ abgeändert (falls
zutreffend).

Ich bestätige hiermit, daß ich den Inhalt der oben angegebenen Patentanmeldung, einschließlich der Ansprüche, die eventuell durch einen oben erwähnten Zusatzantrag abgeändert wurde, durchgesehen und verstanden habe.

Ich erkenne meine Pflicht zur Offenbarung jeglicher Informationen an, die zur Prüfung der Patentfähigkeit in Einklang mit Titel 37, Code of Federal Regulations, § 1.56 von Belang sind.

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

FLOOR CARPET INSTALLING SYSTEM

the specification of which is attached hereto unless the following box is checked:

- ☒ was filed on 22 Sept. 1998
as United States Application Number or PCT
International Application Number
PCT/EP98/06020 and was amended on
_____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

German Language Declaration

Ich beanspruche hiermit ausländische Prioritätsvorteile gemäß Title 35, US-Code, § 119 (a)-(d), bzw. § 365(b) aller unten aufgeführten Auslandsanmeldungen für Patente oder Erfinderurkunden, oder § 365(a) aller PCT internationalen Anmeldungen, welche wenigstens ein Land ausser den Vereinigten Staaten von Amerika benennen, und habe nachstehend durch ankreuzen sämtliche Auslandsanmeldungen für Patente bzw. Erfinderurkunden oder PCT internationale Anmeldungen angegeben, deren Anmeldetag dem der Anmeldung, für welche Priorität beansprucht wird, vorangeht.

Prior Foreign Applications
(Frühere ausländische Anmeldungen)

_____ (Number) (Nummer)	_____ (Country) (Land)
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_____ (Number) (Nummer)	_____ (Country) (Land)
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Ich beanspruche hiermit Prioritätsvorteile unter Title 35, US-Code, § 119(e) aller US-Hilfsanmeldungen wie unten aufgezählt.

_____ (Application No.) (Aktenzeichen)	_____ (Filing Date) (Anmeldetag)
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_____ (Application No.) (Aktenzeichen)	_____ (Filing Date) (Anmeldetag)
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Ich beanspruche hiermit die mir unter Title 35, US-Code, § 120 zustehenden Vorteile aller unten aufgeführten US-Patentanmeldungen bzw. § 365(c) aller PCT internationalen Anmeldungen, welche die Vereinigten Staaten von Amerika benennen, und erkenne, insofern der Gegenstand eines jeden früheren Anspruchs dieser Patentanmeldung nicht in einer US-Patentanmeldung, bzw. PCT internationalen Anmeldung in in einer gemäß dem ersten Absatz von Title 35, US-Code, § 112 vorgeschriebenen Art und Weise offenbart wurde, meine Pflicht zur Offenbarung jeglicher Informationen an, die zur Prüfung der Patentfähigkeit in Einklang mit Title 37, Code of Federal Regulations, § 1.56 von Belang sind und die im Zeitraum zwischen dem Anmeldetag der früheren Patentanmeldung und dem nationalen oder im Rahmen des Vertrags über die Zusammenarbeit auf dem Gebiet des Patentwesens (PCT) gültigen internationalen Anmeldetags bekannt geworden sind.

_____ (Application No.) (Aktenzeichen)	_____ (Filing Date) (Anmeldetag)
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_____ (Application No.) (Aktenzeichen)	_____ (Filing Date) (Anmeldetag)
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Ich erkläre hiermit, daß alle in der vorliegenden Erklärung von mir gemachten Angaben nach bestem Wissen und Gewissen der Wahrheit entsprechen, und ferner daß ich diese eidesstattliche Erklärung in Kenntnis dessen ablege, daß wissentlich und vorsätzlich falsche Angaben oder dergleichen gemäß § 1001, Title 18 des US-Code strafbar sind und mit Geldstrafe und/oder Gefängnis bestraft werden können und daß derartige wissentlich und vorsätzlich falsche Angaben die Rechtswirksamkeit der vorliegenden Patentanmeldung oder eines aufgrund deren erteilten Patentes gefährden können.

I hereby claim foreign priority under Title 35, United States Code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

Priority Not Claimed
Priorität nicht beansprucht

_____ (Day/Month/Year Filed) (Tag/Monat/Jahr der Anmeldung)	<input type="checkbox"/>
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_____ (Day/Month/Year Filed) (Tag/Monat/Jahr der Anmeldung)	<input type="checkbox"/>
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I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below.

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

_____ (Status) (patented, pending, abandoned) (Status) (patentiert, schwebend, aufgegeben)
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_____ (Status) (patented, pending, abandoned) (Status) (patentiert, schwebend, aufgegeben)
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

German Language Declaration

VERTRETUNGSVOLMACHT: Als benannter Erfinder ⁽⁵⁾ beauftrage ich hiermit den (die) nachstehend aufgeführten Patentanwalt (Patentanwälte) und/oder Vertreter mit der Verfolgung der vorliegenden Patentanmeldung sowie mit der Abwicklung aller damit verbundenen Angelegenheiten vor dem US-Patent- und Markenamt: (Name(n) und Registrationsnummer(n) auflisten)

David S. Abrams Reg. No. 22,576

Postanschrift:

Telefonische Auskünfte: (Name und Telefonnummer)

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: (list name and registration number)

Robert H. Berdo Reg. No. 19,415

Alfred N. Goodman Reg. No. 26,458

Mark S. Bicks Reg. No. 28,770

John E. Holmes Reg. No. 29,392

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Mark S. Bicks (202) 659-9076

Vor- und Zuname des einzigen oder ersten Erfinders	Full name of sole or first inventor <u>Axel Schulte</u>
Unterschrift des Erfinders	Inventor's signature <u>[Signature]</u>
Datum	Date <u>JUNE 17/2000</u>
Wohnsitz	Residence <u>Holzgerlingen, Germany DEX</u>
Staatsangehörigkeit	Citizenship <u>German</u>
Postanschrift	Post Office Address <u>Karlstrasse 12</u>
	<u>D-71088, Holzgerlingen, Germany</u>
Vor- und Zuname des zweiten Miterfinders (falls zutreffend)	Full name of second joint inventor, if any
Unterschrift des zweiten Erfinders	Second Inventor's signature
Datum	Date
Wohnsitz	Residence
Staatsangehörigkeit	Citizenship
Postanschrift	Post Office Address

(Im Falle dritter und weiterer Miterfinder sind die entsprechenden Informationen und Unterschriften hinzuzufügen.)

(Supply similar information and signature for third and subsequent joint inventors.)